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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/588,618

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Seiichiro Noritake

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EXAMINER

WAITS, ALAN B

ART UNIT

PAPER NUMBER

3656

NOTIFICATION DATE

DELIVERY MODE

10/16/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/588,618	<b>Applicant(s)</b> NORITAKE, SEIICHIRO	
	<b>Examiner</b> ALAN B. WAITS	<b>Art Unit</b> 3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/5/2007</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation “the gear is provided with a tooth-missing gear part in which a teeth part is formed at a predetermined position”. It is unclear how teeth can be located at the “tooth-missing” part.

Claim 1 recites “the first rack part engages with the tooth-missing gear part”. It is unclear how a part missing teeth can engage a rack member.

Claim 5 recites the limitation “as the gear, a first gear on one side of both side positions of the rack member and a second gear on the other side of the both side portions”. This limitation is grammatically awkward, rendering the claim unclear. It is also unclear if the gear is considered to be one of the first gear or the second gear, or if there are three gears (the gear, the first gear and the second gear).

Claim 5 recites the limitation “a pair of outer side portions” three times. It is unclear if these are the same pair of outer side portions in each instance or if there are three separate pairs of outer side portions.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Tung USP 6789439.

Tung discloses a similar device comprising:

Re clm 1:

- A gear (14, fig 2) which is driven by the motor (21, fig 2)
- A rack member (13, fig 2) which is linearly driven by the gear
- The gear is provided with a tooth-missing gear part (smooth portion of 14, fig 2) in which a teeth part (141, fig 2) is formed at a predetermined position in a circumferential direction of the gear
- The rack member is provided with a first rack part (133, fig 2) which causes the rack member to move in one direction when the motor rotates in one direction and the first rack part engages with the tooth-missing gear part
- A second rack part (134, fig 2) which causes the rack member to move in the other direction when the motor rotates in the one direction and the second rack part engages with the tooth-missing gear part

Re clm 2:

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- The tooth-missing gear part is in a non-engagement state with the second rack part when the tooth-missing gear part engages with the first rack part and the tooth-missing gear part is in a non-engagement state with the first rack part when the tooth-missing gear part engages with the second rack part (fig 2)

Re clm 3:

- The first rack part and the second rack part are extended in parallel to each other (fig 2)

Re clm 4:

- The rack member is provided with a pair of inner side portions (133 and 134, fig 2) between which the gear is disposed and which are extended in parallel to each other
- The first rack part is formed in one of a pair of the inner side portions and the second rack part is formed in the other of a pair of the inner side portions (fig 2)

5. Claims 1 and 5, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Harvie USP 1898956.

Harvie discloses a similar device comprising:

Re clm 1:

- A gear (25, fig 2) which is driven by the motor (A, fig 2)
- A rack member (21, fig 2) which is linearly driven by the gear

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- The gear is provided with a tooth-missing gear part (smooth portion of 25, fig 2) in which a teeth part (26, fig 2) is formed at a predetermined position in a circumferential direction of the gear
- The rack member is provided with a first rack part (21, fig 2) which causes the rack member to move in one direction when the motor rotates in one direction and the first rack part engages with the tooth-missing gear part
- A second rack part (21, fig 2) which causes the rack member to move in the other direction when the motor rotates in the one direction and the second rack part engages with the tooth-missing gear part

Re clm 5:

- A first gear (25, fig 2) on one side of both side positions of the rack member
- A second gear (25, fig 2) on the other side of the both side positions
- The rack member is provided with a pair of outer side portions which face in opposite directions and are extended in parallel to each other (fig 6)
- The first rack part is formed in one of a pair of the outer side portions (fig 6)
- The second rack is formed in the other of a pair of the outer side portions (fig 6)

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tung

USP 6789439 as applied to claim 1 above, and further in view of JP 2000-320955.

Tung discloses all the claimed subject matter as described above.

Tung does not disclose:

- The driven member is an opening/closing member whose position is changed between an open position and a close position by the rack member

JP955 teaches a similar gear and rack device comprising:

- The driven member (9, fig 2) is an opening/closing member whose position is changed between an open position and a close position by the rack member (abstract)

Since both Tung and JP995 teach gear and rack devices, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the gear and rack device of Tung into the device of JP995 and provide:

- The driven member is an opening/closing member whose position is changed between an open position and a close position by the rack member

to achieve the predictable result of linearly actuating a rack relative to a rotating gear.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Stiner USP 6283392, Tsepenuk USP 5655404, Morgan USP 2385457 and Noah USP 1703497 each disclose a similar device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALAN B. WAITS whose telephone number is (571)270-



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3664. The examiner can normally be reached on Monday through Friday 7:30 am to 5 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alan B Waits/  
Examiner, Art Unit 3656

/Richard WL Ridley/  
Supervisory Patent Examiner, Art Unit 3656